#15/appeal Brief 4-2502 K.Russell

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of Atty. Docket

ANTONIUS H.M. HOLTSLAG PHN 17,049

Serial No.: 09/268,254 Group Art Unit: 2673

Filed: March 15, 1999 Examiner: V. Kovalick

DISPLAYING VIDEO ON A PLASMA DISPLAY PANEL

Commissioner for Patents
Washington, D.C. 20231

Sir:

BRIEF FOR APPELLANT

This is an appeal from the Examiner of Group 2673 finally rejecting claims 1-5 in this application.

(1) Real Party in Interest

The real party in interest in this application is U.S. Philips Corporation by virtue of an Assignment from the inventor, recorded on March 15, 1999, at Reel 9824, Frame 0758-0759.

(2) Related Appeals and Interferences

There are no other Appeals and/or Interferences related to this application.

(3) Status of the Claims

Claims 1-5 stand finally rejected by the Examiner.

(4) Status of Amendments

There was one (1) Response filed on January 4, 2002, after final rejection of the claims on November 27, 2001, which was considered by the Examiner.

(5) Summary Of The Invention

The subject invention relates to the displaying of a video signal on a plasma display panel (PDP). As described in the Substitute Specification on page 2, paragraph [0003], lines 2-6, "An interlaced video signal has a frame period with a first and a second video field period. Usually, the odd lines of the video signal from the first video field, and the even lines of the video signal form the second video field." A progressive video signal, on the other hand, has a frame period containing all of the odd and even lines of the video signal presented progressively, i.e., one after the other. When either of these video signals are applied to a cathode ray tube (CRT), the synchronizing signals accompanying the video signal are used to control the scanning of electron beams to apply the lines of the video signal to the phosphors on the faceplate of the CRT. A PDP is formed with display lines, which each comprise a plasma channel with two spaced electrodes. The synchronizing signals are used to generate addresses for activating

the specific plasma channels in the appropriate order, such that the lines of the video signal may be applied to the appropriate plasma channel (display line).

An example of one type of PDP is shown in Fig. 1 and described in the Substitute Specification in paragraphs [0019] and [0020], on pages 5 and 6. As shown therein, the PDP includes n display lines D1, …, Dn. Each of the display lines Di is formed by a plasma channel Pi with which two spaced-apart select electrodes Si1, Si2 are aligned. The respective display line Di is selected by applying a sufficiently high voltage between the two electrodes Si1 and Si2. In this embodiment of a PDP, a line of black matrix material Bm separates two consecutive plasma channels.

Another type of PDP (known as Alternate Lighting In Surface Plasma Display Panel (ALIS PDP)) is shown in Fig. 2 and described in the Substitute Specification in paragraph [0021] on page 6. While similar to the PDP of Fig. 1, in this PDP, two consecutive plasma channels Pi, Pi+1 have one electrode Si+1 in common. The display lines in this PDP are selected in an interlaced sequence to provide a one-by-one section of all display lines Di.

The subject invention is concerned with the activation of the appropriate plasma channels (display lines) such that when the ALIS PDP is used for displaying a progressive video signal, uneven aging of the phosphors of the odd display lines (plasma channels), as compared to the aging of the even display lines, is prevented. In particular, as described in the Substitute Specification on page 2,

paragraph [0004], when displaying a progressive video signal on an ALIS PDP, only the odd display lines (plasma channels) are used. When the number of lines in the video signal is substantially the same as the number of display lines in the PDP, only the odd video lines are used and are displayed on only the odd display lines of the PDP. When the number of lines in the video signal is substantially equal to half the number of display lines, then all of the lines of the video signal are displayed on the odd display lines of the PDP. This leads to the uneven aging of the odd display lines of the PDP, as compared to the even display lines of the PDP.

The subject invention seeks to alleviate this situation by alternately displaying the progressive video signal on the odd display lines only, or on the even display lines only, this being done for a certain period of time which is larger than a field period of the video signal. If the certain period of time is, for example, one hour, then the progressive video signal is displayed using the odd display lines for one hour, and then it is displayed using the even display lines for the next hour, and then this sequence is repeated.

(6) Issues

Whether the invention as claimed in claims 1-5 is unpatentable under 35 U.S.C. 103(a) over U.S. Patent 4,562,463 to Lipton.

(7) Grouping Of Claims

Appellant asserts that claims 1-5 stand and fall together.

(8) Arguments

The Lipton patent discloses a stereoscopic television system with field storage for sequential display of right and left images. As noted by the Examiner, the Lipton patent contemplates the use of the invention therein with not only cathode ray tube (crt) displays, but also may be "used in conjunction with any one of a number of various display technologies such as liquid crystal, light emitting diode, plasma display panels, or various other modern display techniques." (col. 14, lines 48-59). This should be quite evident since Lipton is treating the crt as merely a display device, the invention in Lipton being in the processing of the video signals that are to be applied to the display device. Hence, Lipton does not distinguish in how any of the above-noted display devices are driven.

Appellant believes that the Examiner is confusing image lines in the video signal with display lines in the plasma display panel (PDP). In particular, as indicated in claim 1, the video signal has video lines in video field periods. This is the electrical signal that is to be displayed. However, the plasma display panel has display lines arranged in a first and a second display field.

In claim 1 of the subject application, a distinction is made between "video lines" of the video signal and "display lines" of

the plasma display panel. In particular, during a time period which is longer than the video field period, the video data signals of the video lines are supplied to the display lines of one of the display fields. Then during another of the time periods, the video data signals of the video lines are supplied to the display lines of the other one of the display fields. As noted in the Substitute Specification at paragraph [0027] on page 8, line 25 to page 9, line 2, this time period may be one hour. As such, the video lines of the video signal are supplied to only the display lines of one of the display fields for one hour, and then the video lines of the video signal are supplied to only the display lines of the other of the display fields for one hour. As noted in the Substitute Specification at paragraph [0010] on page 4, this is done so that the phosphors in the odd and even display lines (i.e., the plasma channels) of the plasma display channel age substantially equally.

Appellant submits that the Lipton television system only deals with processing of the video signal and does not address how this video signal is to be applied to the different display lines (i.e., plasma channels) of a plasma display panel.

(9) Conclusion

Based on the above arguments, Appellant believes that the subject invention is not rendered obvious by the prior art and is patentable thereover. Therefore, Appellant respectfully requests that this Board reverse the decisions of the Examiner and allow this application to pass on to issue.

Respectfully submitted,

by _____
Edward W. Goodman, Reg. 28,613
Attorney

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It is hereby certified that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to:

COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

On April 11, 2007

By _____

(10) Appendix

CLAIMS ON APPEAL

1. (Amended) A method of displaying a video signal with video lines in a video field period on a plasma display panel having a first and a second display field of display lines, the display lines of the first display field being in an interlaced position with respect to the display lines of the second display field, the method comprising the steps:

alternately selecting several times the first display field only, or the second display field only, both during respective time periods which are longer than the video field period; and

supplying video data signals in conformance with the video lines to the display lines of the selected display field.

2. (Amended) The method as claimed in claim 1, characterized in that the number of video lines in a video field period is smaller than or substantially equal to the number of display lines of the first or second display field.

3. (Amended) The method as claimed in claim 1, characterized in that the respective time periods are substantially longer than the video field period.

4. (Amended) A circuit for displaying a video signal with video lines in a video field period on a plasma display panel having a first and a second display field of display lines, the display lines of the first display field being in an interlaced position with respect to the display lines of the second display field, the circuit comprising:

means for alternately selecting several times the first display field only, or the second display field only, both during respective time periods which are longer than the video field period; and

means for supplying video data signals in conformance with the video lines to the display lines of the selected display field.

5. (Amended) A plasma display device comprising a plasma display panel and a circuit for displaying a video signal with video lines in a video field period on a plasma display panel having a first and a second display field of display lines, the display lines of the first display field being in an interlaced position with respect to the display lines of the second display field, the circuit comprising:

means for alternately selecting several times the first display field only, or the second display field only, both during respective time periods which are longer than the video field period; and

means for supplying video data signals in conformance with the video lines to display lines of the selected display field.

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Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed is an original plus two copies of an Appeal Brief in the above-identified patent application.

Please charge the fee of $320.00 to Deposit Account No. 14-1270.

Respectfully submitted,

By _____
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CERTIFICATE OF MAILING

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